DB30512-M

VHF/UHF Dual-Band Vehicle Antenna
30-88MHz, 225-512MHz with optional L1 or L1/L2 GPS

General

Tactical dual-band whip antenna, designed to be installed on armed forces vehicles, for connection to a VHF radio 30-88MHz and a UHF radio in the band 225-512MHz.

The antenna is designed as a monopole in the VHF band, with performance similar to an end-fed VHF-only antenna. The UHF part is an elevated high gain dipole which reduces distortion of the radiation patterns that could be caused by the environment of a vehicle.

The antenna is available with single or duel feed in the VHF/UHF bands. Optional L1 or L1/L2 GPS is also available. See option table overleaf for details.

Electrical Specification

	VHF	UHF	GPS
Frequency Band	30-88 MHz	225-512 MHz	1575.42 ± 10 MHz
V.S.W.R.	3.5 : 1	3.5 : 1	Supply voltage: 2.7-5.5V Preamplifier: 26.5 dB @ 5V Noise figure: 2.5dB
Average Gain	-4 to 0 dB rel. l/4	0 dBi ± 2	
Power	100 watts CW	50 watts CW	
Connector (Defualt)	BNC female (see option table)	TNC female (see option table)	SMA female
EMP	Integrated		
Polarization	Vertical		RHCP
Directivity	Omni-directional		
Isolation VHF-UHF	> 30 dB		

Mechanical & Environmental Specification

Dimensions	Height Top diameter	2.35 m 8 mm
Mass	Total Base Lower whip Upper whip	3.4 kg 2.1 kg 1.1 kg 0.2 kg
Color	Base Whips	Black Green or sand
Temperature range operation	-40°C / +70°C	
Salt fog	96 hours	
Shocks	25 shocks at 40 km/h	
Wind rating	160 km/h	

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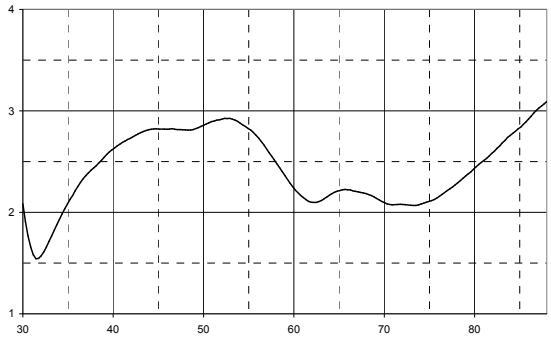
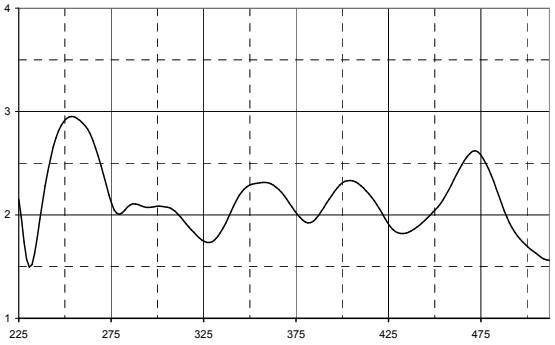
Options Table

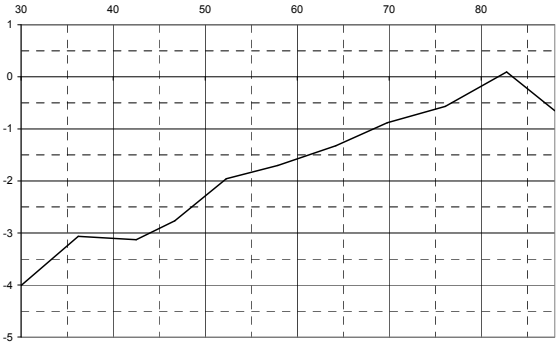
Description	Part Number	VHF Connector	UHF Connector	GPS Connector
Dual-Band 30-88 MHz 225-512 MHz Dual Feed	DB30512-MDF	BNC Female	N Female (BNC & TNC option)	N/A
Dual-Band 30-88 MHz 225-512 MHz Dual Feed, L1 GPS	DB30512-MDF-L1	BNC Female	N Female (BNC & TNC option)	SMA Female
Dual-Band 30-88 MHz 225-512 MHz Dual Feed, L1/L2 GPS	DB30512-MDF-L2	BNC Female	N Female (BNC & TNC option)	SMA Female
Dual-Band 30-88 MHz 225-512 MHz Single Feed	DB30512-MSF	BNC Female (BNC & N option)		N/A
Dual-Band 30-88 MHz 225-512 MHz Single Feed, L1 GPS	DB30512-MSF-L1	BNC Female (BNC & N option)		SMA Female
Dual-Band 30-88 MHz 225-512 MHz Single Feed, L1/L2 GPS	DB30512-MSF-L2	BNC Female (BNC & N option)		SMA Female



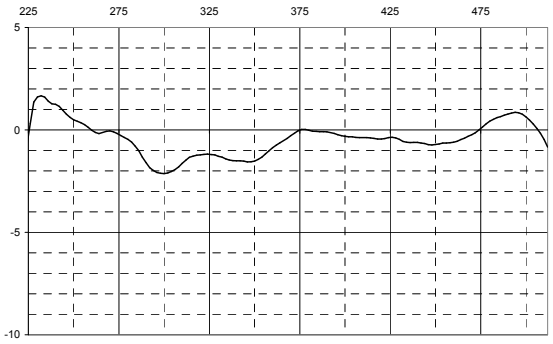
Typical VHF SWR on a shelter



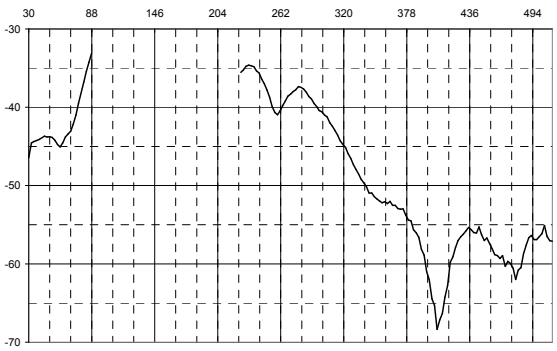
Typical UHF SWR on a shelter



Typical VHF gain in dB rel. λ/4 whips



Typical UHF gain in dBi



Typical isolation between VHF/UHF ports